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DIGITAL PATHOLOGY IN ITALY: PRELIMINARY RESULTS FROM A NATIONAL SURVEY

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Introduction/ Background

Digital pathology has been around since many years now, but it is still not fully integrated in work routine. The Italian Society of Pathology and CytoDiagnostics (SIAPEC) contributed to its development at national level, and is willing to stimulate better collaboration and sharing for the aims of continuing education and training. For this, a common infrastructure for hosting digital slides could be useful. For this, SIAPEC, in collaboration with the University of Udine, decided to investigate the current status of digital pathology in Italy, to foresee possible development paths.

Aims

The aim of the present work is to present preliminary results on digital pathology diffusion in the Italian pathology institutes, and to understand if there is interest and need for a common infrastructure for continuing education and training in pathology through digital slides.

Methods

A survey has been developed in two formats (online through Google Forms and as Word file) to ask 24 questions to Pathology laboratory Chairs. Recipients were contacted through email and addressed to both versions. The survey included questions on the availability of slide scanners, on the organization of slide/image archives (if any), on the aims of the archives, on the technical availability of slides and on their anonymization, and finally on the foreseen advantages of digital pathology. The survey started in January 2016.

Results

Of the 241 recipients (i.e., Pathology Institutes in Italy), 48 (20%) answered the survey at the time of submission. 14 Institutes (39%) declared to own at least one scanner. However, all the others have traditional tools for image acquisition: cameras on the microscope, macroscopic cameras, digital microscopes, fluorescence microscopes with acquisition tools, confocal/ deconvolution microscopes <Figure 1>. 17 Institutes manage organized slide or image archives, however in all but 2 cases they are not integrated with the LIS. Who has an archive, typically stores 11-50 slides or images per month, with a total number of cases being between 500 and 1000.The most frequent aims of the archive are Education (7), Teleconsultation (6), Image analysis (6). Answers to technical questions (image formats, Z-axis scanning) were less frequent than others: details are not always known to pathologists. About half of the Institutes anonymize the slides by covering the tag, the others not. When asked about the possible advantages of digital pathology, Italian pathologists seems to be conservative. In fact, the most chosen application is second opinion (44), followed by online case development for scientific aims (29), and education (27). Diagnostic routine is chosen only 14 times, while the possibility of integration with other clinical data and images is chosen by 15 only. However, in general digital pathology seems not yet applied in diagnostic routine, but rather relegated to ancillary roles. This fact is also supported by the low number of high throughput scanners owned by Institutes: only 3 declared having large slide feeders (>100 slides). At the time of the congress updated results will be provided.
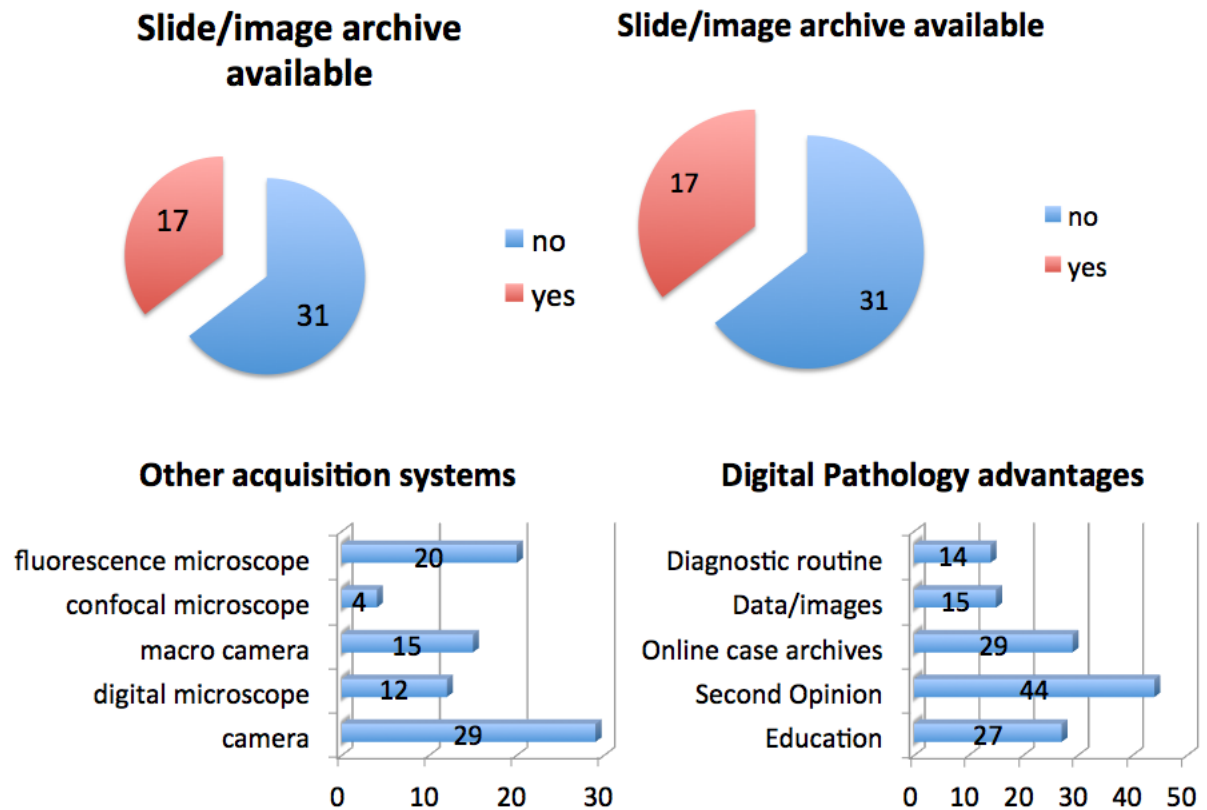
Figure 1.